A PROSPECTIVE RANDOMIZED COMPARATIVE STUDY OF USG GUIDED RADIAL ARTERY CANNULATION BY LONG AXIS AND MODIFIED SHORT AXIS TECHNIQUE

BACKGROUND: Currently USG is used to guide radial artery cannulation. In this study, we compared the success rate of modified SA-OOP technique with that of traditional LA-IP technique

METHODS: one hundred and twenty patients posted for major surgery requiring continuous invasive monitoring were included. They were randomized using a computer generated random number into two groups: group S (SA-OOP) and group L (LA-IP). The primary end points were success of the first insertion attempt and the ultrasonic cannulation time. The secondary end points were ultrasonic location time, number of attempts, number of re directions and complications like hematoma, vasospasm, posterior wall puncture.

RESULTS: The ultrasonic location time and cannulation time for the modified SA-OOP technique are significantly lower than the LA-IP group (P value 0.000 and 0.000 respectively). The incidence of success in the first attempt was slightly higher in the modified SA-OOP approach (95.2%) compared to LA-IP approach (87.9%).

There is no statistically significant difference in the formation of vasospasm (P value 0.232), hematoma formation (P value 0.672) and posterior wall puncture (P value 0.058).

CONCLUSION: The modified SA-OOP approach decreases the ultrasonic location time and cannulation time with decrease in incidence of complications compared to the traditional LA-IP approach.

KEYWORDS: Arterial cannulation, Modified SA approach, Traditional LA approach.